



# WORK SHEET

## Module 3.2 Calculating Feet Traveled Per Second

Name \_\_\_\_\_

Date \_\_\_\_\_

### Calculating Feet Traveled Per Second Formula

Score \_\_\_\_\_

One mile = 5,280 feet

The formula:

$5,280 \text{ feet} \div 60 \text{ min} \div 60 \text{ Sec} = 1.467 \text{ feet traveled per second}$

or simplified method:

$\text{speed (say it's 30mph)} \div 2 = 15 + \text{speed (30mph)} = 45 \text{ feet/second traveled}$

### INSTRUCTIONS

Use the formula to calculate the distance a vehicle travels at these various speeds.

25mph = \_\_\_\_\_

35mph = \_\_\_\_\_

45mph = \_\_\_\_\_

55mph = \_\_\_\_\_

65mph = \_\_\_\_\_

75mph = \_\_\_\_\_

### Solve this problem:

John travels to school every day averaging 30mph. (This time does not account for any stops, delays, etc., which does not typically occur!) He travels 6 miles one way. How long does it take him to get to school?

John is late one day and increases speed to 40mph. How much time does he save?



# WORK SHEET Answer Key

## Module 3.2 Calculating Feet Traveled Per Second

---

Use the formula to calculate the distance a vehicle travels at these various speeds.

25mph = 37.5

35mph = 52.5

45mph = 67.5

55mph = 82.5

65mph = 97.5

75mph = 112.5

John travels to school every day averaging 30mph. (This time does not account for any stops, delays, etc., which does not typically occur!)

He travels 6 miles one way. How long does it take him to get to school?

- $30\text{mph} \times 1.467 = 44$  feet per second traveled
- $44 \text{ feet} \times 60 \text{ seconds in a minute} = 2640 \text{ feet per minute (1/2 mile)}$
- $6 \text{ miles} \times 5,280 \text{ feet (mile)} = 31,680 \text{ feet in 6 miles}$
- $31,680 \text{ feet (6 miles)} \div 2640 \text{ feet (minute)} = \text{Takes 12 minutes for 6 miles}$

John is late one day and speeds up to 40mph. How much time does he save?

- $40\text{mph} \times 1.467 = 58.5$  feet per second traveled
- $58.5 \times 60 \text{ seconds} = 3510 \text{ feet per minute}$
- $6 \text{ miles} \times 5280 = 31680 \text{ feet in 6 miles}$
- $31680 \text{ feet} \div 3510 = 9 \text{ minutes}$

He may get there 3 minutes earlier, if he doesn't get stopped by law enforcement in which case he will really be late! He would benefit by not leaving for school late.